

WHAT IS CLAIMED IS:

1. A method of screening for a compound useful in the treatment of a disease or condition characterized by an immune cells disorder, wherein said cell expresses NTPDases, said method comprising the steps of
contacting a candidate compound with ecto-nucleoside triphosphate diphosphohydrolase (NTPDase),
wherein the candidate compound is selected if the activity of said NTPDase is reduced in the presence of the candidate compound as compared to that in the absence thereof.
2. A method as defined in claim 1, wherein said contacting of said candidate compound with said NTPDase is performed in an immune cell selected from the group consisting in normal T lymphocyte, normal B lymphocyte, normal NK cell, normal macrophage, normal monocyte, Jurkat cell, Raji cell, Ramos cell, MonoMac™ cell, K562 cell and U937 cell.
3. A method as defined in claim 2, wherein said immune cell is a T lymphocyte.
4. A method as defined in claim 2, wherein said immune cell is a B lymphocyte.
5. A method as defined in claim 2, wherein said immune cell is a Jurkat cell.
6. A method as defined in claim 2, wherein said immune cell is a Raji Cell.
7. A method as defined in claim 2, wherein said immune cell is a Ramos cell.
8. A method as defined in claim 2, wherein said immune cell is a MonoMac™ cell.
9. A method as defined in claim 2, wherein said immune cell is a K562 cell.
10. A method as defined in claim 2, wherein said immune cell is a U937 cell.

11. A method as defined in claim 2, wherein said immune cell is a NK cell.

12. A method for inhibiting an immune cell activity in a mammal, comprising targeting immune cells with an effective amount of a NTPDase inhibitor.

13. A method as recited in claim 12, wherein said cells are normal lymphocytes.

14. The method as recited in claim 13, wherein said normal cells are normal T lymphocytes.

15. The method as recited in claim 14, wherein said activity is the T lymphocyte proliferation.

16. The method as recited in claim 13, wherein said normal lymphocytes are normal B lymphocyte.

17. The method as recited in any one of claims 12 to 16, wherein said activity is the production of antibodies.

18. A method as recited in claim 12, wherein said cells are neoplastic lymphocytes.

19. The method as recited in claim 18, wherein said neoplastic lymphocytes are neoplastic T lymphocytes.

20. The method as recited in claim 19, wherein said neoplastic T lymphocytes are Jurkat cells.

21. The method as recited in any one of claims 12 to 19, wherein said activity is induced by organ or tissue transplant.

22. The method as recited in any one of claims 12 to 20, wherein said activity is induced by an allergen.

23. The method as recited in claim of claim 12 to 22, wherein said activity is induced in autoimmune diseases.

24. A method as recited in any one of claims 12 to 23, wherein said NTPDase inhibitor is selected from the group consisting of BGO 136, erythrosin B, nucleotide or nucleotide derivative including AMP, 8 Bus-AMP and 8 Bus-ATP, and analogues thereof.

25. The method as recited in any one of claims 12 to 23, wherein said inhibitor is BGO136 or a BGO136 analogue.

26. The method as recited in any one of claims 12 to 23, wherein said inhibitor is AMP or an AMP analogue.

5 27. The method as recited in any one of claims 12 to 23, wherein said inhibitor is 8 Bus-AMP.

28. The method as recited in any one of claims 12 to 23, wherein said inhibitor is ATP or an ATP analogue.

10 29. The method as recited in any one of claims 12 to 23, wherein said inhibitor is 8 Bus-ATP.

30. The method as recited in any one of claims 12 to 23, wherein said inhibitor is erythrosine B or an erythrosin B analogue.

15 31. A method to prevent or reduce the risk of rejection of transplanted tissue or organ, comprising administering to said animal an effective amount of NTPDase inhibitor.

32. A method as recited in claim 31, wherein said NTPDase inhibitor is selected from the group consisting of BGO 136, erythrosin B, nucleotide or nucleotide derivative including AMP, 8 Bus-AMP and 8 Bus-ATP, and analogues thereof.

20 33. The method as recited in claim 32, wherein said inhibitor is BGO136 or a BGO136 analogue.

34. The method as recited in claim 32, wherein said inhibitor is AMP or an AMP analogue.

25 35. The method as recited in claim 32, wherein said inhibitor is 8 Bus-AMP.

36. The method as recited in claim 32, wherein said inhibitor is ATP or an ATP analogue.

37. The method as recited in claim 32, wherein said inhibitor is 8 Bus-ATP.

30 38. The method as recited in claim 32, wherein said inhibitor is erythrosine B or an erythrosin B analogue.

39. The method as recited in claim 32, wherein said inhibitor is BGO 136.

40. Composition for use as an immunosuppressive agent in graft transplant comprising an effective amount of BGO 136 or BGO 136 analogue in a pharmaceutically acceptable carrier.

41. Use of a BGO 136 or BGO 136 analogue in the making of a medicament for use as an immunosuppressive agent in graft transplant.